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**STATE WATER CONTROL BOARD
ENFORCEMENT ACTION - ORDER BY CONSENT
ISSUED TO
THE TOWN OF LOVETTSVILLE
FOR
THE TOWN OF LOVETTSVILLE WASTEWATER TREATMENT PLANT
VPDES Permit No. VA0023183**

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code § 62.1-44.15, between the State Water Control Board and the Town of Lovettsville regarding the Town of Lovettsville Wastewater Treatment Plant for the purpose of resolving certain violations of the State Water Control Law and the applicable permit and regulation.

SECTION B: Definitions

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "305(b) report" means the report required by Section 305(b) of the Clean Water Act (33 United States Code § 1315(b)), and Va. Code § 62.1-44.19:5 for providing Congress and the public an accurate and comprehensive assessment of the quality of State surface waters.
2. "Board" means the State Water Control Board, a permanent citizens' board of the Commonwealth of Virginia, as described in Va. Code §§ 10.1-1184 and 62.1-44.7.
3. "BOD5" means Biochemical Oxygen Demand.

4. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia, as described in Va. Code § 10.1-1183.
5. "Director" means the Director of the Department of Environmental Quality, as described in Va. Code § 10.1-1185.
6. "Discharge" means discharge of a pollutant. 9 VAC 25-31-10.
7. "Discharge of a pollutant" when used with reference to the requirements of the VPDES permit program means:
 - (a) Any addition of any pollutant or combination of pollutants to surface waters from any point source; or
 - (b) Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.
8. "DMR" means Discharge Monitoring Report.
9. "Effluent" means wastewater – treated or untreated – that flows out of a treatment plant, sewer, or industrial outfall.
10. "Facility" or "Plant" means the Town of Lovettsville Wastewater Treatment Plant at 39183 Irish Corner Road, Lovettsville, Virginia, which treats and discharges treated sewage and other municipal wastes, for the residents and businesses of the Town of Lovettsville.
11. "The Town" means the Town of Lovettsville, a political subdivision of the Commonwealth of Virginia. The Town is a "person" within the meaning of Va. Code § 62.1-44.3.
12. "Notice of Violation" or "NOV" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.
13. "NRO" means the Northern Regional Office of DEQ, located in Woodbridge, Virginia.
14. "Order" means this document, also known as a "Consent Order" or "Order by Consent," a type of Special Order under the State Water Control Law.
15. "2009 Permit" means VPDES Permit No. VA0023183 which was issued under the State Water Control Law and the Regulation to the Town on January 13, 2009, and expired on January 12, 2014.

16. "2014 Permit" means VPDES Permit No. VA0023183 which was issued under the State Water Control Law and the Regulation to the Town on February 10, 2014, and which expires on February 9, 2019.
17. "Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 USC § 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water... 9 VAC 25-31-10.
18. "Pollution" means such alteration of the physical, chemical, or biological properties of any state waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety, or welfare or to the health of animals, fish, or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses, provided that (i) an alteration of the physical, chemical, or biological property of state waters or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution but which, in combination with such alteration of or discharge or deposit to state waters by other owners, is sufficient to cause pollution; (ii) the discharge of untreated sewage by any owner into state waters; and (iii) contributing to the contravention of standards of water quality duly established by the Board, are "pollution." Va. Code § 62.1-44.3.
19. "Regulation" means the VPDES Permit Regulation, 9 VAC 25-31-10 *et seq.*
20. "State Water Control Law" means Chapter 3.1 (§ 62.1-44.2 *et seq.*) of Title 62.1 of the Va. Code.
21. "State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands. Va. Code § 62.1-44.3.
22. "TSS" means Total Suspended Solids.
23. "Unnamed Tributary" means the unnamed tributary to Dutchman Creek into which Plant effluent has been discharged and continues to be discharged pursuant to VPDES Permit No. VA0023183.
24. "Va. Code" means the Code of Virginia (1950), as amended.
25. "VAC" means the Virginia Administrative Code.
26. "VPDES" means Virginia Pollutant Discharge Elimination System.

27. "Warning Letter" or "WL" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.

SECTION C: Findings of Fact and Conclusions of Law

1. The Town owns and operates the Plant. Until July 2014, the Town contracted with a third-party operator for the operational management and control of the Plant. The 2009 Permit allowed, and the 2014 Permit allows, the Town to discharge treated sewage and other municipal wastes from the Plant to the Unnamed Tributary in strict compliance with the terms and conditions of the Permit.
2. The Unnamed Tributary is located in the Potomac and Shenandoah River Basins and flows into Dutchman Creek approximately 0.9 miles downstream of the Plant outfall. The Unnamed Tributary is assessed in the Final 2014 Water Quality Integrated Report (IR) as fully supporting the aquatic life and wildlife uses. The recreation and fish consumption uses were not assessed.
3. In December 2008, the Town entered into a consent order with DEQ to address inflow and infiltration (I&I) causing high flows to the Plant during rain events, including the preparation of an I&I Action Plan calling for I&I reduction measures and upgraded and expanded hydraulic and treatment capacity for the Plant. The Town began operating the upgraded and expanded Plant in December 2010. In January of 2012, the Town submitted the final flow monitoring report confirming that the I&I Action Plan steps reduced rain-derived I&I by 30% so that the flows to the Plant during expected rainfall events would not typically exceed the maximum hydraulic design flow of 1.124 MGD for the expanded Plant, as called for under the 2008 consent order. On May 9, 2012, the 2008 Consent Order was cancelled.
4. The Town asserts that, despite the Plant improvements made as part of the I&I Action Plan, problems associated with the expansion design and related monitoring systems created additional or new operational reliability challenges during high flow events. After attempts to resolve the problems with the design/build contractor, the Town hired an independent engineering consulting firm to investigate and identify the design and monitoring system problems, with a report prepared in December 2012 that was submitted to the design/build contractor and DEQ.
5. The Town's DMRs submitted pursuant to its the 2009 Permit indicate that the Plant exceeded the following discharge limitations contained in Part I.A of the Permit: the weekly concentration average maximum limit and the monthly concentration average limit for Ammonia-N for the June, and July 2013 monitoring periods; the weekly concentration average maximum limit for Ammonia-N for the August and October 2013 monitoring periods; and the monthly concentration average limit for *E. coli* for the June and July 2013 monitoring periods. According to the Town, the exceedances in June 2013 were caused by several rain-related high flow events where the Plant had one aeration tank offline for repairs and contract operators chose to turn off aeration to avoid release

of solids, resulting in less than complete treatment for Ammonia and E-coli; (b) the Ammonia-N exceedances in June-July 2013 were also caused by or aggravated due to instrumentation failure and a faulty nitrogen probe that could not be replaced for six weeks; (c) the *E. coli* exceedances were due to limited treatment capabilities within the biological process resulting in turbid effluent and less effective treatment of the ultra-violet process; and (d) the Ammonia exceedances in August and October 2013 resulted from high flow events resulting in hydraulic overload at the Plant. During each of these incidents, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant.

6. In the summer of 2013, the Town's contract operator failed to submit on behalf of the Town water quality criteria monitoring sample data and a 2014 Permit application as required by the 2009 Permit. Water quality criteria monitoring sample data required by Part I.C.8 of the 2009 Permit was due to DEQ on or before July 12, 2013, and was received by DEQ on August 16, 2013. The Permit application as required by Part II.M of the 2009 Permit was due to DEQ on or before July 12, 2013, and was received by DEQ on August 16, 2013.
7. On October 28, 2013, the Town reported a discharge onto the ground of approximately 5,000 gallons of sewage sludge from the activated sludge system, tanks, and sludge pits at the Plant occurred. Approximately 2,500 gallons of the sewage sludge entered the Unnamed Tributary. The Town reported that all visible sludge was pumped out. The discharge occurred as a result of an electrical power outage in the community during a rain event, causing a power outage at the Plant and a blown fuse that, upon repowering the Plant, prevented the tertiary filters from operating. A failure of the Verizon phone system prevented the operators from receiving any alarms from the Plant. According to the Town, during this incident, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant.
8. On November 27, 2013, the Town reported that an unknown amount of fine solids (also known as pin floc) was discharged from the Plant due to higher flows (i.e., instantaneous flow exceeds 0.600 mgd for a period of approximately three hours or longer) and a clogged return activated sludge pump. According to the Town, during this incident, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
9. On December 6, 2013, the Town reported that an unknown amount of solids was discharged from the Plant on December 6 and 7, 2013, due to higher flows at the Plant. According to the Town, during this incident, total flows into the Plant were still less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
10. On December 23, 2013, the Town reported that 5,500 gallons of effluent including solids were discharged from the Plant on December 23, 2013, due to higher flows at the Plant. According to the Town, during this incident, total flows into the Plant were less than the

upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.

11. On February 6, 2014, the Town reported that an unknown amount of pin floc was discharged from the Plant to the Unnamed Tributary. According to the Town, this incident was caused by pump station clogging, resulting in high sludge levels and overwhelmed clarifiers, even though total flows into the Plant during this incident were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
12. The Town's DMRs submitted pursuant to the 2014 Permit indicate that the Plant exceeded the following discharge limitations contained in Part I.A of the Permit: the weekly concentration average maximum limit for Ammonia-N for the February, March, November, and December 2015 and January, April, June, July, and August 2016 monitoring periods; the monthly concentration average limit for Ammonia-N for the February, March, November, and December 2015 and January, April, June, July, and August 2016 monitoring periods; the monthly concentration average limit for E.coli for the March 2015 and January, April, June, and July 2016 monitoring periods; the weekly concentration average maximum limit for BOD5 for the March 2015 monitoring period; the monthly concentration average limit for TSS for the March 2015 monitoring period; the weekly concentration average maximum limit for TSS for the December 2015 monitoring period; and the weekly average maximum loading limit for TSS for the March 2015 monitoring period. According to the Town, (i) during each of these incidents, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant, and (ii) each of these exceedances resulted from a clarifier imbalance at the Plant that occurred when the return draw from one clarifier slowed or stopped, causing solids to accumulate in that clarifier until they began to leave the weirs with the effluent ("Clarifier Imbalance"). Also, for the February 2015 exceedance, the equipment malfunction was accompanied by a faulty monitoring alarm signal.
13. On March 4, 2014, the Town reported that an unknown amount of pin floc was discharged to the Unnamed Tributary. The Town attributes this incident to a loss of priming at the return activated sludge pump station and failure of a monitoring alarm. According to the Town, during this incident, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
14. On March 30, 2014, the Town reported that approximately 180,000 gallons of effluent containing pin floc were discharged to the Unnamed Tributary. The Town attributes the unauthorized discharge to a rain event causing higher than normal flows into the Plant that triggered a Clarifier Imbalance, as well as by previous contract operator error in implementing Plant procedures. According to the Town, during this incident, the total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.

15. On April 30, 2014, the Town reported that approximately 5,000 gallons of partially treated sewage were discharged to the Unnamed Tributary. The Town attributes the unauthorized discharge to the failure of two filters after a backwash cycle and a lack of appropriately designed bypass ability. If the filter pit stops pumping, the clarifier backs up and overflows at the return activated sludge pump station ("Filter Pump Station Overflow Deficiency"). The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
16. On June 12, 2014, the Town reported that approximately 20,000 gallons of untreated sewage were discharged from the Plant. Of the 20,000 gallons discharged from the Plant, an estimated 16,000 gallons of partially treated sewage was discharged to the ground or the Unnamed Tributary. The Town attributes the unauthorized discharge to a filter backwash occurrence that added extra flow to the head of the Plant causing a hydraulic overload of the clarifiers ("Filter Backwash Problem"). According to the Town, during this incident, although the Plant experienced higher than normal flows caused by a 2.15-inch rainfall, the total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
17. In July 2014, to improve consistency in operations, the Town assumed direct operational management and control of the Plant using Town employees as Plant operators. The Town also retained an independent consultant to evaluate design problems at the Plant. A report was prepared in December 2014 and submitted to the 2008-2010 Plant upgrade design/build contractor with recommended corrective actions.
18. On March 8, 2015 the Town reported that approximately 40,000 gallons of partially treated sewage were discharged from the Plant. According to a 5-day letter submitted by the Town regarding the discharge, no sewage was observed by Town staff in the Unnamed Tributary. The Town asserts that during this incident, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
19. On March 9 and 10, 2015, the Town reported that approximately 4,000 gallons of partially treated sewage were discharged from the Plant, mostly to the ground but some to the Unnamed Tributary. The Town attributes the unauthorized discharge to a high flow event and a Clarifier Imbalance. According to the Town, during this incident, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
20. On March 19, 2015, the Town reported that approximately 16,000 gallons of partially treated sewage were discharged to the Unnamed Tributary. The Town attributes the unauthorized discharge to a Clarifier Imbalance at the Plant. According to the Town, during this incident, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.

21. In the Spring of 2015, based on the recommendations of the design/build contractor after review of the two previous reports of independent consultant, the Town initiated changes in its operations to mitigate the Plant's performance reliability challenges.
22. On June 7, 2015, the Town reported that approximately 2,000 gallons of partially treated sewage were discharged to the Unnamed Tributary. The Town attributed the unauthorized discharge to a Clarifier Imbalance. According to the Town, during this incident, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
23. On August 24, 2015, the Town approved a Change Order to the original design/build contractor to complete the modifications to the Plant intended to improve performance reliability of the plant. While the Town has informed DEQ that the construction work for this change order has not begun, operational procedures have been revised by the Town to improve operational reliability pending these improvements to the Plant, including (a) reducing sludge retention time (SRT) to twenty-one (21) days; (b) lowering mixed liquor suspended solids (MLSS) to a range of 1900-2300 mg/l; (c) reduction of return activated sludge (RAS) rate from a range of 200-240 gpm to a range of 140-180 gpm; and (d) lower wasting rates.
24. On September 29, 2015, the Town reported that approximately 2,000 gallons of partially treated wastewater were discharged or spilled onto the ground, with approximately 400 gallons entering the Unnamed Tributary. The Town attributed the unauthorized discharge to a Clarifier Imbalance at the Plant. According to the Town, during this incident, total flows into the Plant were less than the upgraded hydraulic capacity of the Plant. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
25. On November 2, 2015, Plant personnel found that a large tree had fallen on and damaged the blowers and control panel for clarifier cells #1 and #2 b. Operations staff immediately surveyed the damage, conducted all necessary repairs, inspected the clarifier cells, and then tested the clarifier system for a period of 24 hours, finding that all systems were functioning normally at that point.
26. On November 5, 2015, the Town reported that approximately 8,000 gallons of partially treated sewage were discharged to the Unnamed Tributary. Upon investigation, the Town determined this unauthorized discharge was caused by a solids loss from clarifier cell #1 triggered by a clog in the cell #1 return line. The loss was stopped immediately upon discovery by isolation of the clarifier cell from the treatment process. The Town performed cleanup of the Unnamed Tributary after the loss by pumping untreated sewage back into the Plant. Further investigation indicated that the clog likely resulted from previous undiscovered debris from the November 2, 2015 tree fall incident that fell into clarifier cell #1 and obstructed the cell return line following several days of operation after the cell's repair and restart on November 3.

27. From November 5, 2015 to January 8, 2016, clarifier cell #1 was removed from service so that it could be pumped down for cleaning, maintained and repaired and fully inspected to ensure proper operation.
28. The Town subsequently determined that the shutdown of clarifier cell #1 from November 5, 2015 to January 8, 2016 placed the two remaining clarifier cells under higher loads. In addition, in connection with recent Plant equipment repairs and replacement, the Town determined that the starters for the aeration blower motors for clarifier cells #1 and #2 were undersized by 25%. The Town believes that the combination of these two factors caused excessive heat and strain on the motors and their starters and wiring, in turn compromising treatment functionality and contributing to Ammonia exceedances.
29. The Town's DMRs submitted pursuant to the 2014 Permit indicate that the Plant exceeded the following discharge limitations contained in Part I.A of the Permit: maximum weekly average and maximum monthly average for Ammonia during the November 2015 monitoring period; and maximum weekly average for TSS and maximum weekly average and maximum monthly average for Ammonia during the December 2015 monitoring period. The Town asserts that the exceedances cited in this paragraph are related to the Plant upgrade problems noted in Paragraph C.4.
30. According to the Town, during December 2015, the plant experienced heavy plant loading and poor performance of the aeration system, which negatively impacted performance of the Plant. This was compounded by the Filter Backwash Problem, causing light pin floc to flow into the effluent, which in turn may have contributed to the TSS exceedance in December. Additionally, a failure of the "fuzzy filter" transformer, and consequent bypass of the "fuzzy filter," most likely contributed to the TSS violation.
31. On February 3, 2016, the Town reported that approximately 95,000 gallons of pin floc were discharged from the Plant to the Unnamed Tributary, though no solids were observed in the Unnamed Tributary. According to the Town, during this incident, the Plant became hydraulically overloaded due to high inflow caused by melting of over 30 inches of snow, compounded by a subsequent 1-inch rain event and the recurring Filter Backwash Problem. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
32. On February 4, 2016, the Town reported that approximately 5,000 gallons of untreated sewage was discharged from the Plant to the Unnamed Tributary. The Town attributed the unauthorized discharge to a Clarifier Imbalance. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.
33. On February 25, 2016, the Town reported that approximately 5,000 gallons of partially treated sewage was discharged from the Plant to the Unnamed Tributary. The Town attributed the unauthorized discharge to a Clarifier Imbalance. The Town asserts that this incident was related to the Plant upgrade problems noted in Paragraph C.4.

34. On May 3, 2016 and May 4, 2016, the Town reported that approximately 40,000 gallons of untreated sewage was discharged from the Plant to the Unnamed Tributary. The Town reported that the discharge occurred when sludge depths in clarifier cell #1 became elevated due to the inability to monitor or control individual RAS rates from the cells coupled with high backwash flows and high flows coming into the Plant.
35. The Town's DMRs submitted pursuant to the 2014 Permit indicate that the Plant exceeded the following discharge limitations contained in Part I.A of the Permit: monthly concentration average for *E.coli* and maximum and weekly maximum average and maximum monthly average for Ammonia during the January 2016 monitoring period; and monthly concentration average limit for *E.coli* for the February 2016 monitoring period. The Town attributes this incident to a mechanical failure associated with a seized operating valve that allowed bypass of the disinfection process. According to the Town, during January 2106, Ammonia results dropped significantly back to within Permit limits, reflecting reactivation of clarifier cell #1 on January 8.
36. On June 6, 2016, the Town notified DEQ that (a) certain planned modifications and improvements to the Plant were scheduled to address and correct identified design deficiencies; (b) in preparation for such work to commence June 13, 2016, clarifier cells #1 and #2 would be taken out of service for three weeks starting on June 6; and (c) during that time, all Plant flows would be routed through clarifier #3 and that the fuzzy filters would be by-passed to minimize the risk of solids loss from excessive backwash flows. These corrective improvements were made pursuant to Change Order #3 with the design/build contractor for the Plant and included the addition of RAS flow control valves and RAS Flow meters for clarifier cells #1 and #2. The Town informed DEQ that they were expected to reduce the number of solids loss events resulting from clarifier cell imbalances and to improve operation of the Plant by reducing the overall rate of return. The corrective improvements and related suspension of service of clarifier cells #1 and #2 and the fuzzy filters proceeded pursuant to the timeline provided to DEQ.
37. On June 8, 2016 DEQ staff conducted an unannounced inspection of the Plant while the Change Order #3 corrective improvements at the Plant were underway. During the inspection, and in an inspection report dated July 5, 2016, DEQ staff confirmed that two of the three clarifier units and both fuzzy filters at the Plant were offline for maintenance. The Town asserts that during the inspection, Plant personnel noticed and alerted DEQ staff to the presence of white grease balls at the substrate of the receiving stream. In addition, visible solids were observed in the UV chambers, several bulbs were burned out and the UV intensity meters did not appear to be functioning.
38. The Plant daily logs show that, on June 6 and on June 9, 2016, the UV chambers were cleaned, and that, on June 10, 2016, the fuzzy filters were returned to service. The Town attributes the discharge of grease balls and the visible solids in the UV chambers to the Change Order 3 work-related diversion of all flow through one clarifier cell and temporary by-passing of the fuzzy filters.

39. On July 8, 2016, the Town submitted an initial e-mail response to the July 5, 2016 inspection report. The response stated that, as of June 24, 2016, all UV intensity meter probes had been replaced and were currently functioning, nonfunctioning UV lights had been replaced, and malfunctioning UV ballasts were being replaced. The response also noted that the fuzzy filters had been returned to service by mid-June.
40. On July 22, 2016, the Town submitted further documentation to DEQ showing that the UV intensity meters were functional. The submittal also noted that the presence of solids in the UV chambers as observed during the time of the inspection was the result of both fuzzy filters being down to make scheduled corrective improvements. The Town noted that there has been no evidence of solids in the UV chambers or grease balls in the receiving stream since both fuzzy filters were returned to service.
41. On February 18, 2018, DEQ sent the Town an NOV regarding exceedances of the 2014 Permit limits based on DEQ's review of the Town's DMRs for the Plant for the second half of 2017. The NOV notes that the Dissolved Oxygen concentration reported in the August 2017 DMR was below the required concentration minimum of 6.0 mg/L and that the Total Phosphorous annual concentration average level reported in the December 2017 DMR exceeded the annual concentration average limit of 1.0 mg/L. The Town responded to this NOV by letter dated February 23, 2018, noting that: (a) the reported Dissolved Oxygen concentration was erroneous due to a data entry typographical error for Dissolved Oxygen readings on August 23 and 24; and (b) the total RAS flow meter installed in 2016 had failed earlier in 2017, but repair of the meter had been substantially delayed due to meter repair facility's damage from Hurricane Harvey, which delay and lack of replacement until January 2018 led to the Total Phosphorous exceedance in December 2017.
42. DEQ NRO has issued the following Warning Letters and NOV's for the aforementioned violations: WL No. W2013-08-N-1010, issued August 13, 2013, for the June 2013 monitoring period permit limit exceedances; WL No. W2013-09-N-1003, issued September 6, 2013, for the July 2013 monitoring period permit limit exceedances and failure to timely file a permit application for renewal of the Permit; NOV No. W2013-12N-0002, issued December 19, 2013, for the October 2013 monitoring period permit limit exceedance and for the October 28, 2014 unauthorized discharge; NOV No. W2015-04N-0004, issued May 5, 2015, for the February 2015 monitoring period permit limit exceedances; NOV No. W2015-05-N-0007, as revised and reissued May 21, 2015, for the March 2015 monitoring period permit limit exceedances and October 8, 10, and 19, 2015 unauthorized discharges; NOV No. W2015-08-N-0002, issued on August 17, 2015, for the June 7, 2015 unauthorized discharge; NOV No. W2015-11-N-0003, issued on November 6, 2015, for the September 29, 2015 unauthorized discharge; NOV No. W2016-01-N-0002, issued on January 14, 2016, for the November 2015 monitoring period permit limit exceedances and for the November 5, 2015 unauthorized discharge; NOV No. W2016-02-N-0007, issued on February 19, 2016, for the December 2015 monitoring period permit limit exceedances; NOV W2016-03-N-0001, issued on March 8, 2016, for the January 2016 monitoring period permit limit exceedances; NOV W2016-04-N-0008, issued on April 21, 2016, for the February 2016 monitoring period

permit limit exceedances and February 3, and 25, 2016 unauthorized discharges; NOV W201606N-0010, issued on June 10, 2016, for the April 2016 monitoring period permit limit exceedances; NOV W2016-07-N-0002, issued on July 8, 2016, for the May 3, and 4, 2016 unauthorized discharge; NOV W2016-08-N-OOOI, issued August 11, 2016, for the June 2016 monitoring period permit limit exceedances and the deficiencies noted during the June 8, 2016 inspection; NOV W2016-09-N-OOOI, issued on September 20, 2016, for the July 2016 monitoring period permit limit exceedances.

43. The Town informed DEQ that to address the design deficiencies at the Plant and otherwise improve Plant performance and functionality, from 2016 to 2018, the Town performed a number of equipment repairs and replacements at the Plant to improve operational reliability and help prevent unpermitted discharges, including the following: (a) replacement of all power wiring between control panels and blowers; (b) replacement of all blower starters, contactors, disconnects, and heaters for overloads; (c) repair of clarifier cell #1 control panel, contacts, and miscellaneous electrical components; (d) replacement of all LDO caps; (e) draining and cleaning of clarifier cell #1; (f) replacement of "fuzzy filter" transformer; (g) excavation and repair of leaky UV treatment bank #3 influent valve; (h) fuzzy filter improvements including complete reprogramming of filter backwash system and raising the filter standpipe and redirecting overflow to plant drain; (i) automated filter bypass valve installation allowing bypass of filters under specific failure scenarios; (j) effluent flow meter upsized and air release added to address flow constrictions; (k) RAS Pump Station #1 improvements including additional piping, new flow meters and automation of the controls to maintain set RAS flow rates from each clarifier; (l) control upgrades to integrate dissolved oxygen information; (m) upgraded SCADA, including replacement of the computer and older equipment, to improve reporting, trending and alarming; (n) UV weir modifications to improve flow balance between each unit; and (o) sump pump improvements to the influent meter pit to eliminate unauthorized discharges.
44. On January 1, 2018, a previously approved testing protocol period of one year was initiated. Testing was intended to measure the Plant performance during higher flows up to the maximum hydraulic capacity of the Plant. (0.6 to 1.125 mgd). A simulated event conducted in April, 2018 revealed a design deficiency in the splitter box that created an uneven flow split to the clarifiers and adversely affected clarifier performance and caused a loss of solids from clarifier cell #1. The Town then contracted with an outside engineer, CHA, to evaluate and design a solution.
45. As a result of the engineering analysis performed in the summer of 2018, CHA issued a memorandum report on August 13, 2018 setting forth its findings and recommendation to address the splitter box design deficiencies. These recommendations included (a) installation of a horizontal plate on the influent side of the splitter box with a smaller opening in the middle to improve blending of the mixed liquor with the influent and evenly distribute flow to each clarifier unit; and (b) complete additional plant performance testing to confirm that the horizontal plate to be installed in the splitter box functions as intended to provide equal flows to each clarifier unit, and that unauthorized discharges are thereby prevented. In addition, CHA also found that installation of a

manual gate to clarifier cell #1 does not appear to be necessary, but this will be confirmed upon further testing as described.

46. Based on the CHA memorandum report, the Town has since entered into a contract change order with the design-build contractor to fabricate and install the horizontal plate in the Splitter Box, which work was underway in November 2018, and conduct a simulated flow test to confirm the function of the plate.
47. The Town's operating logs indicate that it discharged treated wastewater from the Plant every day from June 1, 2013 through the present date.
48. Va. Code § 62.1-44.5 states that: "[E]xcept in compliance with a certificate issued by the Board, it shall be unlawful for any person to discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances."
49. The Regulation, at 9 VAC 25-31-50, also states that except in compliance with a VPDES permit, or another permit issued by the Board, it is unlawful to discharge into state waters sewage, industrial wastes or other wastes.
50. Va. Code § 62.1-44.15(5a) states that a VPDES permit is a "certificate" under the statute.
51. The Department has issued no permits or certificates to the Town other than VPDES Permit No. VA0023183.
52. The Unnamed Tributary is a surface water located wholly within the Commonwealth and is a "state waters" under the State Water Control Law.
53. Part I.A of the Permit contains Permit effluent limits.
54. Part II.F of the 2014 Permit states that "except in compliance with this permit or another permit issued by the Board, it shall be unlawful for any person to: 1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or 2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to an animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation or for other uses."
55. Part I, Section C.8 of the 2009 Permit states that "the permittee shall monitor the effluent at Outfall 001 for the substances noted in Attachment A, "Water Quality Criteria Monitoring" according to the indicated analysis number, quantification level and sample type. Using Attachment A as the reporting form, the data shall be submitted with the next application for reissuance, which is due before or on 12 July 2013...".
56. Part II, Section M of the Permit states that "if the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit

a new application at last 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board...”.

57. Part II.Q of the Permit states that “the permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.”
58. Part I.A.1.a of the Permit states that “there shall be no discharge of floating solids or visible foam in other than trace amounts.”
59. Part II.H of the Permit states that “[i]f any unusual or extraordinary discharge including a bypass or upset should occur from the treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after discovery of the discharge...”
60. Based on the results of data submitted on the Town’s monthly DMRs, documentation submitted to DEQ, results of the June 8, 2016 inspection, and a file review, the Board concludes that the Town has violated Part I.A, Part I.C.8, Part II.F, Part II.H, Part II.M, and Part II.Q of the Permit, 9 VAC 25-31-50 and Va. Code § 62.1-44.5, by discharging treated sewage and municipal wastes from the Plant while concurrently failing to comply with the conditions of the Permit, as described in paragraph C.3 through C.40 above.
61. In order for the Town to return to compliance, DEQ staff and representatives of the Town have agreed to the Schedule of Compliance, which is incorporated as Appendix A of this Order.

SECTION D: Agreement and Order

Accordingly, by virtue of the authority granted it pursuant to Va. Code § 62.1-44.15, the Board orders the Town, and the Town agrees to:

1. Perform the actions described in Appendix A of this Order; and
2. Pay a civil charge of \$6,370.17 within 30 days of the effective date of the Order in settlement of the violations cited in this Order.

Payment shall be made by check, certified check, money order or cashier's check payable to the "Treasurer of Virginia," and delivered to:

Receipts Control
Department of Environmental Quality
Post Office Box 1104
Richmond, Virginia 23218

The Town shall include its Federal Employer Identification Number (FEIN) with the civil charge payment and shall indicate that the payment is being made in accordance with the requirements of this Order for deposit into the Virginia Environmental Emergency Response Fund (VEERF). If the Department has to refer collection of moneys due under this Order to the Department of Law, the Town shall be liable for attorneys' fees of 30% of the amount outstanding.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend this Order with the consent of the Town for good cause shown by the Town or on its own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice and opportunity to be heard.
2. This Order addresses and resolves only those violations specifically identified in Section C of this Order. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the facility; or (3) taking subsequent action to enforce the Order.
3. For purposes of this Order and subsequent actions with respect to this Order only, the Town admits the jurisdictional allegations, and agrees not to contest, but does not admit the findings of fact and conclusions of law in this Order.
4. The Town consents to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.
5. The Town declares it has received fair and due process under the Administrative Process Act and the State Water Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order.
6. Failure by the Town to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.

7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
8. The Town shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other unforeseeable circumstances beyond its control and not due to a lack of good faith or diligence on its part. The Town shall demonstrate that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. The Town shall notify the DEQ Regional Director verbally within 24 hours and in writing within three business days when circumstances are reasonably anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:
 - a. the reasons for the delay or noncompliance;
 - b. the projected duration of any such delay or noncompliance;
 - c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and
 - d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director verbally within 24 hours and in writing within three business days, of learning of any condition above, which the parties intend to assert will result in the impossibility of compliance, shall constitute a waiver of any claim of an inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto and any successors in interest, designees and assigns, jointly and severally.
10. This Order shall become effective upon execution by both the Director or his designee and the Town. Nevertheless, the Town agrees to be bound by any compliance date which precedes the effective date of this Order.
11. This Order shall continue in effect until:
 - a. The Director or his designee terminates the Order after the Town has completed all of the requirements of the Order;
 - b. The Town petitions the Director or his designee to terminate the Order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or
 - c. the Director or Board terminates the Order in his or its sole discretion upon 30 days' written notice to the Town.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve the Town from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. Any plans, reports, schedules or specifications attached hereto or submitted by the Town and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.
13. The undersigned representative of the Town certifies that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind the Town to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of the Town.
14. This Order constitutes the entire agreement and understanding of the parties concerning settlement of the violations identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.
15. By its signature below, the Town voluntarily agrees to the issuance of this Order.

And it is so ORDERED this 22 day of March, 2019.



Thomas A. Faha, Regional Director
Department of Environmental Quality

------(Remainder of Page Intentionally Blank)-----

The Town of Lovettsville voluntarily agrees to the issuance of this Order.

Date: 1/11/2019 By: Robert W. Ritter Jr., Town Manager.
(Person) (Title)

Commonwealth of Virginia

City/County of Loudoun

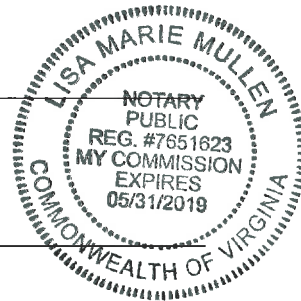
The foregoing document was signed and acknowledged before me this 11th day of
January, 2019, by Robert W. Ritter Jr. who is
Town Manager of the Town of Lovettsville on behalf of the Town.

Lisa Marie Mullen
Notary Public

Registration No. _____

My commission expires: _____

Notary seal:



APPENDIX A SCHEDULE OF COMPLIANCE

The Town of Lovettsville shall:

1. Corrective Action:

- a. Within 60 days of the effective date of this order, install the modifications to the splitter box at the Facility as contemplated in CHA's August 2018 memorandum report and pursuant to Change Order #6 (or any substitute or additional change order(s) if needed) to the Town's design-build contract for Facility improvements.
- b. Within 30 days of installation of the modification of the splitter box, perform testing of its performance in accordance with the CHA August 2018 memorandum report's recommended methodology to confirm the Facility's ability to comply with 2014 Permit conditions at design capacity influent loads.
- c. Within 120 days of completion of the performance testing of the modified splitter box, submit to DEQ a written report of the findings and conclusions of the performance testing and, if such testing indicated remaining performance deficiencies, any additional recommended evaluations of Facility performance or further corrective modifications to Facility design.

2. DEQ Contact:

Unless otherwise specified in this Order, the Town shall submit all requirements of Appendix A of this Order to:

Attention: Enforcement
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193